



6-7-8 May 2004

2nd EUFORA MEETING

AJACCIO CORSICA FRANCE





MEMBERS OF EUFORA PRESENT

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THURSDAY MAY 6th 2004

2H45 p.m.

Opening by Philippe MAGNAN (President of A Cupulatta Center and FFEPT)

Mr Philippe MAGNAN (promotor of the meeting) explains the conditions of 2nd meeting EUFORA organisation, with the difficulties for organising such an important meeting. He is very happy of receiving the European representatives of herpetology, and understands the difficulties of each person to be present here in Corsica.

Dr Alain BERTRAND (copromotor of the meeting) presents then the agenda of the meeting with the great lines of discussions.

The thursday afternoon is dedicated to the legislation in Europe.

1st presentation: EUFORA GOALS by Alain BERTRAND (Acting President of FFEPT)

QUESTIONS

Why does EUFORA exist ?

What are we waiting for?

Do all the members have the same goals ?

What are we able to do ?

How much energy can each of us invest in EUFORA ?

All these questions are the most important points needing an answer to go further in the future.

WHY DOES EUFORA EXIST

In Europe, animal right organizations have presently a high influence on legislators and no counterpart exists.

Herp breeder skills are ignored in the EC level

Every European country has something to learn from the others

Because of this the sentence :

« All for one, one for all »

is at last not so stupid!

WHAT ARE WE ABLE TO DO?

We have to determine and set the EUFORA goals

We have to learn various law systems and problems encountered in each country involved in EUFORA.

We have to find out how EC legislators can help solving each of our local problems

WHAT WE ARE ABLE TO DO

Create an efficient and reliable list of proposals for the European herpetological societies related to :

- *Identification system for all species*
- *Working out of the minimal conditions for keeping and breeding*
- *Elaboration of a reasonable proposal for an European Certificate of Capacity*

SOME PROPOSALS

Create committees

- *Legislation*
- *Identification*
- *Breeding and husbandry*
- *Scientific section making the link between « breeding techniques and herp conservation biology»*

Create a document with all the results gathered, six or eight months later by these committees

Build a valuable status and label for the « reptiles and amphibians bred in captivity ».

CONCLUSION

This is the second meeting to build EUFORA

All of you share the same present desire to build and participate in a European network for herpetology

Because fondness of herps is not an obstacle to their protection but should enhance better preservation of the endangered species!

2nd presentation English legislation by Chris NEWMAN

At the present time, in England an important challenge occurs. The legislation was a local legislation and now the government has decided to make a general legislation on all the territory of Great Britain.

Text wrote by Chris NEWMAN:

The Animal Welfare Bill - New legislation on the keeping of animals

Here in the UK we are currently in the process of review all animal welfare legislation, some 22 or so Acts of Parliament, the aim is to up-date and merge this legislation into one new Act, the Animal Welfare Bill.

The Animal Welfare Bill (AWB) is currently under a rather lengthy consultation process but will ultimately become law (regardless of change of political party) and will govern the keeping and trading of animals for decades to come, the legislation that will be replace which affects keepers and traders most are:

Protection of Animals Act 1911

Pet Animals Act 1951

Animal Boarding Establishments Act 1963 (potentially)

Breeding of Dogs Acts 1973 and 1991 (potentially)

Breeding and Sale of Dogs (Welfare) Act 1999 (potentially)

All parties with an interest have been invited to participate in the consultation process, but historically undue consideration has been given to groups fundamentally opposed to the keeping of animals in captivity. The system essentially works by "he who shouts loudest gets heard" system and the opposition groups, who greatly outnumber the pro-keeping groups, have been very successful in exploiting this. These groups are wide ranging, from so-called animal rights groups such as CAPS, Animal Aid, the Born Free Foundation and many others who believe that animals are better dead than captive and also the more mainstream groups, particularly the RSPCA which, unfortunately, has an ever increasing animal rights agenda.

In the first consultation January 2002 some 2,351 replies were received by DEFRA; perhaps the single biggest question posed which affects keepers and traders respective was:- "Keeping exotic or dangerous animals as pets

In recent years there has been an increase in the number of exotic or dangerous animals kept as pets. Sometimes their owners do not understand the type of care that these animals need or that they have the potential to inflict serious injury or cause illness. Should there be greater controls over the buying and selling of exotic or dangerous animals?"

Here are some of the comments to the above from 'alleged' animal welfare organisations:

Animal Aid

The needs of 'exotics' cannot be properly provided for in the artificial conditions of captivity and within the limited knowledge frameworks of their carers.

Animals Asia Foundation

Should be banned. They are hard to care for and can cause a health risk.

Animal Welfare Network

Ideally banned or at least discouraged.

International Fund for Animal Welfare

Should ideally be banned but failing that subject to strict licensing control. Recent Belgian legislation provides guidance concerning which animals need to be subject to licensing controls.

League Against Cruel Sports

Should be banned. The only exception should be under licence where the animal is being kept for the betterment of mankind.

RSPCA

The keeping of vulnerable species of exotics should be prohibited.

This was just a selection of the many groups calling for either a total ban or strict controls on the keeping of so-called exotics. The RSPCA have alone invested over a £1,000,000 in the past 5 years in the pursuance on the ban of the keeping of exotics (mainly reptiles) and if we also look at the amount invested by AA, IFAW, CAPS etc we are looking a multi-million pound campaign to ban, or severely restrict the keeping of reptiles in the UK. By contrast the industry has invested no funds in defending its livelihood. The bastions of the hobby, the British Herpetological Society, took matters so seriously they did not even bother to submit a single syllable in advocacy for keepers, only the Reptilian magazine, ARK, ASRA and the IHS mustered the energy to put pen to paper to lobby the government on behalf of reptile keepers. It may be that other groups were simply

unaware that the consultation process had commenced and it is very important that we have greater communication between interested parties so that the pro-keeping lobby can become more effective.

Issues raised in the consultation and the % that commented on a particular issue

Of all issues discussed, only docking of tails commanded a higher percentage of response than issues pertaining to exotic pets which I think that speaks volumes concerning the importance with which animal rights groups view these issues

The question "Should there be greater regulatory control over public and private pet fairs?" received a response rate (mainly hostile) of 15%, far greater than the average response rate for most other issues.

"Should there be greater regulatory control over the buying and selling of exotic animals?" had a similar response percentage at 15.4%

This legislation has very serious implication not just for the UK but also the rest of the EU. Fortunately some of have been rather proactive in the review of this legislation and are deeply involved with the consultation process. DEFRA have convened several working groups to advise on new legislation. One of the most contentious areas is reptile shows, anti animal keeping organisation have over the passed five years stopped virtually all reptile shows in the UK by exploiting loopholes in the current legislation. Under this new legislation the issues of shows has been one of the most contested areas and it has been a long hard fight to get this issue resolved. Fortunately things have gone in our favor and DEFRA have indicated that under the new legislation reptile shows/fairs will be specifically licensable events, a working group has been established by DEFRA, of which I am chair, to draft regulations for these events.

There are several other working groups established, one on pet shop regulations and one on the breeding of rodents, I am also sitting on these working groups, this has allowed us to have substantial input into the drafting of this new legislation. The consultation process is still on going but the draft enabling legislation is expected to go before parliament in November this year, it is unlikely that it will be enacted until 2006/2007.

3rd presentation French legislation (Certificate of Capacity) by Alain BERTRAND

The French Legislation is regulated by

- CITES
- European regulations
- Bern Convention
- French legislation

The last is being the most restricting

The French legislation makes the distinction between three status for non domestic animals

- Non protected or non regulated species
- Regulated species
- Protected species

Spirit of the French legislation : PROTECTED SPECIES

❖Law of the 10th July 1976

Art 1 : It's everybody's responsibility to watch over the natural heritage of his country

Art. 3 : If the preservation of some species of the natural legacy needs it, the following are forbidden; the destruction, removal from the nest, the destruction, catching, taxidermy or, transport, hawking, utilisation, sale, or purchase of the animals dead or alive.

Art. 4 : A council of state order lays down amongst others :

- A restrictive list of protected species
- Periods of banning ,
- Concerned territories

Art. 5 : The production, holding, the assignment free of charge or subject to payment , the use, the transport, the exportation must be authorized by the relevant ministry.

Art. 6 : The creation of a breeding, or selling, or rent, or transit, or public presentation establishment needs an authorization. The people in charge must have the Certificate of Capacity for keeping animal.

❖ **Order of May 15th 1986**

Including the French Guyana fauna and flora in the list of protected species on French territory.

❖ **Order of July 22th, 1993**

fixed the animal's list of protected species under the articles 3, 4 et 5 of the July 10th, 1976 law. (See attached file)

CERTIFICATE OF CAPACITY

-It is an individual deed given by the administration , it's personal and non transferable, this certificate is given for only the species mentioned inside the document deposited for the certificate.

-All request must be done for the certificate of capacity, the opening of a breeding establishment and if necessary for a public presentation.

-For certificate of capacity and autorisation of opening a breeding establishment, the prefect and local authorities are competent

-If anyone requests for a public presentation and for the others in the same time, national authorities are competent in that case.

Content of the files which must be presented to the authorities:

Qualifications of the candidate

1. His professional experience

2. His knowledge about the species he wants to breed

3. His experience about breeding:

This experience is sanctioned by the diploma obtained by the candidate.

For example : Public presentation

3 years of experience if no diploma

2 months if post university diploma with enough listed teaching.

The documentation given to the Administration must include

• *All information you must know about the species : reproduction, feeding, breeding, nursing, physiology*

• *All information about your breeding establishment, with pictures and descriptions*

• *All information about your results*

• *All information about your goals*

The file must be discussed in front of a jury

which is composed by

Veterinary Administration

*Agent of the Environment ministry
National hunting officer
Others members*

The departmental committee which has worked on the file will give its judgement, and then the certificate will be given or not.

REQUIREMENTS TO OBTAIN the CDC

- Justification of a number of hours of formation
- Justification of an experience in breeding
- Build a file with the description of your knowledge
- Pictures of your animals and installations
- Show pictures of two registers: in and out movements of the animals

DIFFICULTIES FOR THE OBTENTION OF THE CDC

- Unwillingness from administration to :
 - look rapidly into the documentation*
 - give authorization (ecologists.....)*
 - understand the breeders*
- Uncompromising the French law
- Great influence of the ecologists on the administration
- Fight against the exotic animals traffic
- Bad image of the breeders of exotic animals

SOLUTIONS

- Create a real discussion with the authorities
- Create a dynamic from the European laws
- Show the will to fight the traffic in our associations
- Build some references in the breeding as done by the DGHT with their book and exam.

WHEN YOU HAVE THE CDC

- National hunting administration is allowed to come anytime to control the establishment
- Breeding of any species not included in the CDC is forbidden
- If a new species is breeding, one has to submit a new file to the Administration
- Two registers must be kept updated all time in and out movements of the animals , breeding register.
- The CDC can be removed if you don't satisfy all requirements.

DISCUSSIONS

In the end of this first day, we began a discussion about the different points which have been presented.

The goals of EUFORA

It appears that all the participants agree the need to make a real work and to go ahead with EUFORA.

Chris NEWMAN doesn't agree on the fact of creating a certificate of capacity and explains that we should not go ahead of the difficulties and propose a bad thing for us. Chris doesn't want to see a CDC being created as the French people have suffered.

To this fear, the answer was that we have to prepare a good CDC and not wait for a bad text imposed by the administration.

About legislation the questions were rare and the session was closed, Philippe Magnan proposed to visit his parc. All the present people accepted.

FRIDAY MAY 7th 2004

Beginning of the works 8h30

As some members were supposed to take a flight, we settled to tackle some questions as the goals of EUFORA for the next months, the next meeting, and other points.

Before beginning the next presentation, we discussed about the form that we wish EUFORA to take in the future.

Everybody agreed with the fact that the members have to formalize a little to make EUFORA more conspicuous.

Ingo PAULER accepted this idea but asked that EUFORA should make real advances in the future, if we want to really build a true association. He said that he doesn't want agree if EUFORA doesn't really make some tangible results.

One proposition was that Ingo Pauler would be Spakerman of EUFORA. Ingo accepted and a vote by a show of hands ratified this fact.

Alain BERTRAND proposed the nomination of a delegate in each country.

This idea was accepted and here is the the list of the delegates for the following countries :

Germany : Ingo Pauler

Italy : Agostino Montaldi

Great Britain : Chris Newman

Switzerland: Jean Marc Duccotterd didn't accept but will ask for this in the future to the president of CITS

France : Alain Bertrand

Every country can design a delegate.

1st Presentation Photoidentification by Carolin BENDER

Carolin presented her recent work and made an abstract of the work in the past.

It appears that an important work must be made on the acceptance of this method.

The important point of this work was the necessity to demonstrate the validity of this technique of identification on all the tortoise life stages. The protocol used for the pictures of each tortoise is studied by the author in order to obtain for hatching optimum method.

Whole method is described in the booklet which has been published in Germany a few years ago, and has just been translated into English by Nick Smith. (See Text in the end)

Questions : why would we prefer your identification method instead of microchips ?

CB: This photo identification is a non invasive, reliable, and easy method, we have tried it with some customs officers, with one hour of explanations and the success rate was near 90 %. No anaesthesia is necessary, no pain, no trauma.

Questions : Do you think that this method can be available for all reptile species ?

CB : Yes I think that all species can be identified with photo identification, but we will have to find the particularity of each species. This is a very big work.

2nd Presentation TARTA Club ITALIA (text of the presentation)

Agostino **Montaldi**, president of the **TARTA CLUB ITALIA**, described his association a young association born in 2002 in order to get turtle fans together under the principle purpose of safeguard and conservation of wild and captive species. To make the largest number of people aware, we are promoters and organizers of **TARTARUGHE BEACH**, a yearly turtle show which has already seen, on its second edition in 2003, 10.000 visitors (the show is enriched with important vet & researchers conferences). We are already recognized from the central Rome CITES organisation, with whom we started a dialogue.

Text wrote by Agostino Montaldi

My speech will be mainly presenting the situation of the "tortoise and turtle planet" in Italy and related problems.

Unfortunately in Italy we miss the political will to improve the situation, particularly now that economic problems bring no more funds even for relevant projects. We estimated the value of specimens in Italy in no less than **5 million European captive tortoises** (*Testudo marginata*, *Testudo hermanni* and *Testudo graeca*), "against" no more than a few thousand of wild animals.

Unfortunately at least 70-80% captive tortoises are not declared, accomplice the Italian state which in years 1994-1995 had its time to regularize declarations but gave a real poor information about it; I fear this is a problem without quick solutions even because the CE does not think about a new sanatoria or up-dating processes.

The Italian regulation is very prohibitionist, so much to obtain the opposite effect of a good relationship with users and this is because, as it really is, the excessive bureaucracy boosts both poachers and illegal market. Just realize that until a few months ago the State did not emit CITES certifications; however nowadays they do, selecting a so complex and expensive method that it is not going to make matters any easier:

in order to obtain a CITES certificate for one animal born in captivity you have to show 2 photos of it, pay 15,30 € tax to be multiplied 5 times because the animal is followed for 5 years, with new photos and payments each year, giving a total amount of 76.50 € taxes, 10 photos and loss of time for each renewal (just realize work and money needed if your female bore only around 5 little tortoises!...and breeders?!?!?)

Moreover to have the real certificate it lasts at least 3 months: each CITES request is given by a scientific Committee in Rome that is gathered once per month because it is not an official state committee but an external composed one, and related associations (like our is) are not intended to take part on it. It is now easy to understand why ail sells are occurring unlawfully.

Protection projects are nearly non-existent, even rudimentary needs like information on interested places and environment departments as hunting-associations are off. In **Sardinia** in the last 7-8 years the ***Testudo marginata*** fell prey to a never-seen poaching: lots of evidence indicate a definitive decrease of tortoises especially in the touristic north of the island. The market has a big demand (the most acting shamelessly in internet), so in order to stop poachers is important to facilitate swaps and captivity sells; this could even restrict the exotic animal demands by shopkeepers, preventing illnesses and often sicke-unsafe carriers.

Another problem already worrying are aquatic important species like **Trachemys scripta scripta** and **Trachemys scripta elegans**, which powered by a favourable climate cause serious damage on our fragile ecosystem (unfortunately lots of those species are freely sold)

The few surviving *Emys orbicularis* (nearly disappeared in the north, rare in the central and south) risk to be overwhelmed by the more voracious *Trachemys*, that lest but not least carry out a raid on little fishes, amphibians and migrant birds like ducks and coots.

This is because people do not know that these turtles grow big and fast, and those that do not die most of the time are abandoned in rivers and lakes. Nowadays it is difficult to find a lake not colonized by *Trachemys* and they are already successfully reproducing and wintering!

It would be important not to sell any turtles species under four years of age and however decide a minimum dimension, in this way who buys is more responsible and conscious that reptiles that need care and enough space.

It is hoped that all European associations try to create serious and clear regulations to be presented to the European community, so that all country-members will have the same laws; this problem especially occurs now that new countries are entering the UE, and some of them already use CITES notation but are making mistakes in the way of issuing it.

Our association is slowly starting to project the "temporary licence" for shopkeepers and breeders, like the German one. We will probably start having courses for "future teachers" in different regions and provinces and so on, hoping to be recognized by statal controls.

Another project, very complex, is a big "tortoise Park" with the aim of conserving native species, paying a big attention on little bio-genetic differences of the few *Testudo hermanni hermanni* still living the Italian regions, never forgetting *Testudo marginata* from Sardinia, *Testudo graeca iberica* and *Emys orbicularis*. Moreover another aim of the park will be to get back exotic aquatic species left in lakes and rivers.

This does not mean that we will not have a section on exotic species of big relevance; and a didactic section again, to sensibilize in respect and care of these spectacular animals.

At last, a HotShot: the Micro-Chip. New technologies permit to have rice-grains dimensions, we could try an experimentation ??

Maybe with these little products even breeders would join new systems easily

Safeguard projects are nearly non-existent, even rudimentary needs like informations on interested places and environment departments as hunting-associations are off

3rd Presentation Veterinary management of wild Chelonian populations by Mattia BIELLI

Text wrote by Mattia BIELLI

In these last years we are facing a progressive declining of most of the wild animal populations. Reptiles and Amphibians have suffered long time for being considered "inferior vertebrates" and for that reason they had received less attention by scientists involved in conservation compared to the so called "higher vertebrates".

In our days things are slowly changing and, as an example, the important role of Amphibians as ecological indicators is today worldwide recognized¹.

Among Reptiles turtles and tortoises are the two most popular groups and some studies have been carried on to cover different aspects of their ecology and conservation.

The impact of diseases on wild animals can be really dangerous and the Mycoplasma epidemic in the Sonoran and Mojave deserts or the Fibropapillomatosis in marine turtles are well known examples.

Moreover, most of the Chelonian populations have been reduced in size and are endangered; in this conditions a disease outbreak is likely to be fatal³.

To prevent epidemics that could threaten the remaining populations is of paramount importance to collect as much data as possible on the existing individuals; such information will be used as a baseline to enable scientists to better face future outbreaks in the wild.

Surprising very few data are known on health status of wild populations in Europe^{5,6} and, together with many other topics, our knowledge on infectious diseases of free ranging Chelonians should be enhanced.

Despite the tremendous improvements in herpetological medicine in the last years, medical aspects are too often neglected and underestimated when approaching conservation plans for endangered Reptiles and Amphibians⁴.

Regardless to the approach chosen to maintain biological diversity, manipulative or conservative, the main health hazards in field studies are:

- stress
- various injuries
- spreading of pathogens within the population and introducing new pathogens (or more virulent strains) through reintroduction of new specimens.
- dehidrataton

For proper handling stress must be minimized and every procedure should be planned well in advance in a standardized manner.

People working in field situations should be trained for reasonable periods before being allowed to manipulate animals.

The risk of contamination is lowered wearing disposable gloves and to change shoes or boots when moving from different sites.

Since urination is common when handling terrestrial tortoises and water loss can be life threatening in arid habitats, fluid replacement should be considered².

Thanks to the possibility to work on captive Chelonians, the herpetological medicine has developed various techniques and methods that can readily be applied on wild populations.

Those veterinarians experienced in herpetological medicine are usually well trained and uniquely qualified to make accurate evaluations to distinguish between a true pathological condition and other physiological or seasonal changes.

Furthermore the veterinarian's knowledge of anatomy, physiology and pharmacology can be of invaluable assistance in field research⁴.

Specific veterinary research should cover all the aspects of health management such as:

- Establish normal blood values (hematological and biochemical) in different sexes, season, area....
- Check gastro-intestinal and ecto-parasite infections
- Screen for main pathogens (herpes, irido, picorna-virus, mycoplasma)
- Screen for toxic contaminants
- Investigate fecal content to identify food preference
- Monitor reproductive activity

Not only these data can improve our knowledge of the health status of free ranging Chelonians but they can also be used to better manage captive breeding programs.

Since most of Chelonians species in the wild are seriously threatened, captive breeding programs are a viable option for conservation and we must start to prepare healthy stocks for future reintroduction.

In order to avoid introducing new diseases in the wild, we should start thinking at some programs with same sort of certification for the breeding activity where all the reproductive individuals have to be tested for the main diseases according to our most updated knowledge and techniques.

Though is beyond the purpose of this work, the certification should also apply to the origin of the specimens trying to establish groups of animals coming from the same region.

Cooperation among institutions at every level (CITES, IUCN, Environment State Agencies, Societies, Zoological collections, Private Centers, Universities....) and among professional figures (veterinarians, naturalists, ecologists....) is the key factor to achieve the best results in Chelonian conservation worldwide.

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3 J.Flanagan Chapter 3: Diseases and health considerations In: Turtle Conservation, M.W.Klemens ed. Smithsonian Institute Press 2000 Washington

4J.L.Jarchow The Veterinarian's role in Herpetological field studies 2004 7th Int. Symp. on Pathol. and Med. of Reptiles and Amphibians

5 R.E.Marshang, R.M.Schneider Detection of antibodies against chelonid viruses in wild-caught spur-tighed tortoises, Testudo graeca, in Turkey 2002 ARAV Proc. p. 95

6 K.A.Mathes, E.R. Jacobson, S.Blahak, D.R.Braun, I.M.Shumacher, B.Fertard Mycoplasma and Herpesvirus detection in European terrestrial Tortoises in Franca and Morocco 2001 8th ARAV Proc. p.97

4th Presentation : Le Parc de Récupération des Tortues by Jean Marc DUCOTTERD

PRT Chavornay - Switzerland

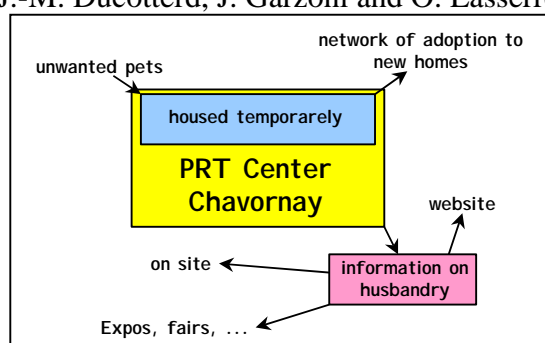
Director : Jean-Marc Ducotterd

Scientific advisor : Denis Mosimann

Initial focus

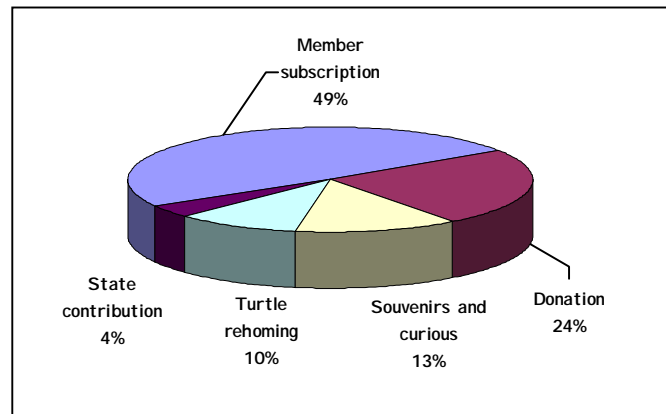
- a real need for the rescue of unwanted exotic turtle in Switzerland
- PRT created in 1994 by J.-M. Ducotterd, J. Garzoni and O. Lasserre

Functionning



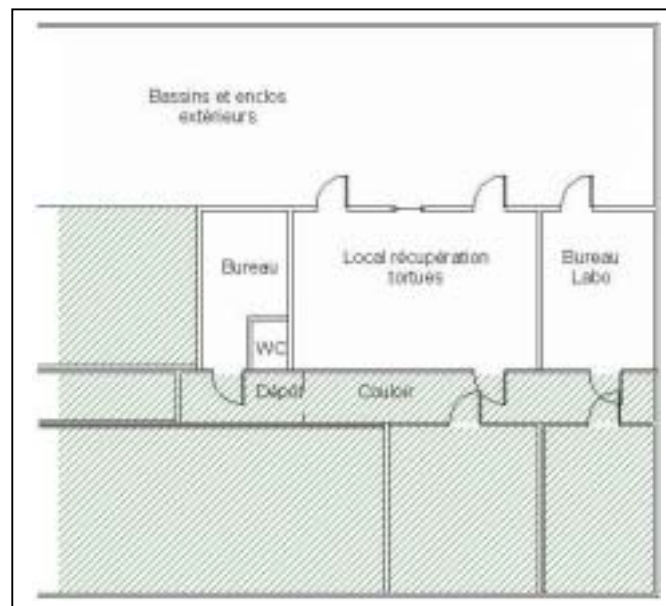
PRT, a well organized NGO for such a goal

- husbandry : 2 teams / 14 persons
- open house every Saturday AM for the public (information - rescue - adoption)
- a website : www.tortue.ch • 400 subscribers to support the NGO
- annual budget of 16'500\$
- a scientific advisor



PRT - initial settings for the rescued turtles

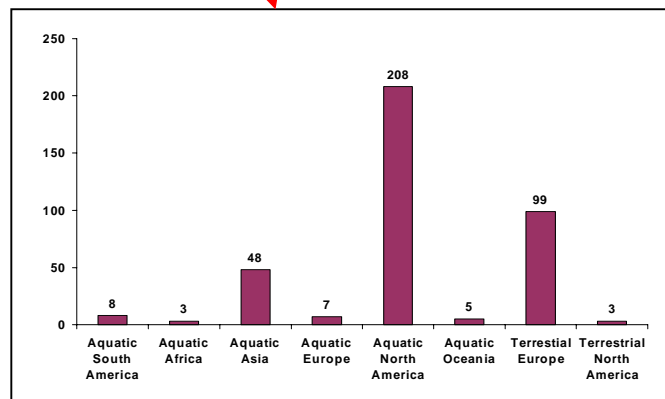
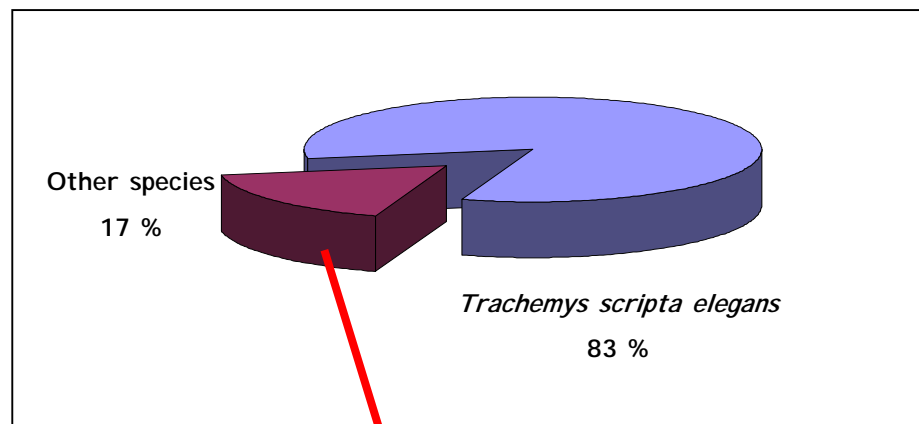
Outdoor • 300m² pens with pools



Knowledge gathered

- husbandry level : development of efficient, fully automatized aquaria using computer technology
- a protocol that reduces the stress / disease pitfall
- a picture of pet turtle kept in captivity in Switzerland
- a very well trained staff able to handle large number of animals daily

Recovered species



Emys Project Switzerland

- Involvement in *in situ* preservation
 - European pond turtle / *Emys orbicularis*, the only native turtle in Switzerland
 - Its Distribution and status poorly known
- ® a need to organize resources and people into an efficient network
- 1999 : creating the subgroup Emys Project / PRT with a steering committee
- 2000 : establishing a list of turtle sites in Switzerland
- 2001-2002 : founding surveys on one site in canton Geneva
- 2003 :- founding surveys on two other sites in cantons Fribourg and Bern
- involved in establishing and leading a national management plan for *Emys*

First results

- 309 individuals caught
- Many ecological data gathered
- Successfully used new trapping method
- DNA analysis

CONCLUSION

After these good presentations no questions were asked, so everybody agreed the proposition for next meeting on 26 September 2004 on the DGHT conference in Hambourg.

Photodocumentation of protected reptiles

Carolin Bender

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Foreword

Why Instructions for Photo documentation?

Government Director GERHARD ADAMS, Federal Environment Ministry

With the bill based on the results of the research efforts financed by the Federal Environment Ministry "Recognition of individual reptiles" it has been shown that certain reptile species can be definitely individually identified on the basis of externally recognisable characteristics which cannot be altered. This opens up the possibility of allowing the use of photos of particular patterns, forms of shell or plate sutures as a means of recognising the individual animal.

Because this method of identification is used without invasive procedures, Federal Minister Trittin has decided to eventually alter the federal laws relating to the protection of species for the species Radiated Tortoises, Greek Tortoises and Hermann's Tortoises, Marginated Tortoises, North and South Malagasy Boas as well as the Madagascar Tree Boa, which at present should replace the stipulated recognition by transponder. These species - in particular the tortoises - form the majority of the specimens kept or traded in Germany. Photo documentation will need to be repeated at regular intervals, for juveniles every 2 years and adults every 5 years.

This change in the law will still take some time, since among other things the Bundesrat must agree to this change.

The DGHT has now produced a brochure which - as I intend - explains to keepers and breeders of reptiles, but also to wildlife protection authorities, how the photos on which the unalterable body markings of every individual are recorded should be taken. Also explained is which body parts of the various species have the unalterable markings and therefore should be clearly visible on the photos. Photo quality is the decisive factor in the acceptance and successful application of this recognition method in practice. This set of instructions is therefore an important as well as useful aide for the keeper of the above mentioned reptile species in the preparation of the photos which will be required in future.

The content of the reptile passport suggested in this brochure goes far beyond the the anticipated demands of the Federal wildlife protection ordinance, which is restricted to a narrower formulation of documentation for certain reptile species. However, accurately describing the variations in markings in the reptile passport will make the procedure a lot easier.

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Introduction

For a large number of reptile species the Federal Wildlife Protection Ordinance provides for recognition by transponder, provided that certain weight limits are met.[] With the R&D project “Methods of recognising individual reptiles” it was proven that for some reptile species identification was possible on the basis of the variation in external characteristics. With this a loophole in knowledge for some reptile species was closed. The Federal Environment Ministry intends to do away with the compulsory provision for recognition by transponder and to replace this with the duty of providing documentation.[]

Federal Wildlife Protection Ordinance in the applicable setting (§10, Paragraph 3) states that documentation must

“...contain a drawn or photographic exhibition of those parts of the body which make identification possible. This exhibition is to be supplemented with a description of the animal which must at least contain the size or length, weight, sex and age as well as a description of distinguishing features.”

By “distinguishing features” is meant individual marks on an animal, such as scars or injuries, which are no longer capable of change.

Beyond the intended reorganisation of the Federal Wildlife Protection Ordinance a “reptile passport” was developed, which can be used as a readily available model for reptile keepers and the appropriate authorities and therefore should also standardise and facilitate the exchange of animals and their documents between the federal states. It should be stressed that the reptile passport shown was worked out in collaboration with representatives of the appropriate authorities.

This brochure should serve as a practical set of instructions for the preparation of documentation for all interested parties.

Contents

| | |
|--|----|
| Photography and Feature Variation | 5 |
| 1 Tortoises | 5 |
| <i>1.1 Which species must in general be photographed?</i> | 5 |
| <i>1.2 For which species is photodocumentation planned as a replacement for the transponder?</i> | 5 |
| <i>1.3 Instructions for photography</i> | 6 |
| <i>1.4 Tips for reptile keepers with many animals</i> | 6 |
| <i>1.5 What must be done with juveniles?</i> | 7 |
| <i>1.6 By which features can individual tortoises be recognised?</i> | 7 |
| <i>1.7 Characteristics of the Radiated Tortoise (Geochelone radiata)</i> | 9 |
| 2 Snakes | 11 |
| <i>2.1 In general which snakes must be photographed?</i> | 11 |
| <i>2.2 For which snakes is photodocumentation intended as a replacement for the transponder?</i> | 11 |
| <i>2.3 Which features are important in the Dumeril's Boa, the Madagascar Ground Boa and the Madagascar Tree Boa?</i> | 11 |
| <i>2.4 Instructions for photographing</i> | 12 |
| 3 Lizards | 13 |
| <i>3.1 Which species are known to have individual markings?</i> | 13 |
| <i>3.2 Instructions for photography</i> | 13 |
| 4 Information on further Appendix | 13 |
| A reptile species | |
| Bibliography | 14 |
| Acknowledgements | 15 |
| Reptile Passport forms | 16 |
| Representation of a 1cm-squared background | |

Photography and Feature Variation

The subject of the tagging of reptiles has been the main focus of interest for reptile owners for some time. The bases for the tagging are the amended species protection laws at EC- and federal level. The EC implementation order (EG-VO939/97) prescribes individual tagging of Appendix-A reptile species for the monitoring of trade. As preferred method of recognition the uniquely numbered microchip transponder is established. Only by proving that this method cannot be used because of physiological or behaviourally-conditioned characteristics is it possible to use other suitable methods as a means of tagging. This regulation is amended and stated more precisely by the effective Federal Wildlife Protection Ordinance. In addition to the control of the trade the Federal Wildlife Protection Ordinance also stretches to cover the keeping of those species affected.

These regulations, as stated above, are to be amended.

The Federal Office for Wildlife Protection placed an R&D (Research and Development) project with the DGHT out of the funds from the Federal Environment Ministry's UFO Plan. Within the framework of this project with the title "Methods of recognising individual reptiles" (running from 15.11.1999 to 30.9.2000) most of the methods here described were worked out (see BENDER & HENLE 2001).

Tortoises

1.1 Which species must in general be photographed?

(Nomenclature after Iverson 1992)

Among land tortoises (Family Testudinidae) a fair number of species must be documented by photograph (Federal Wildlife Protection Ordinance #8 as well as enclosure 6, cross in column 7; no cross in column 6). Up to now among these species suitable characteristics for the identification of individuals with the use of photos have only been examined in the Pancake Tortoise (*Malacochersus tornieri*) and the Egyptian Tortoise (*Testudo kleinmanni*).

In order to determine suitable characteristics for the species named below, additional examinations have to be carried out. Some of the species cited here are rarely if ever kept in human captivity. Nevertheless they are named for the sake of completeness.

As long as further examinations are not carried out only general tips can be given for photography. This applies to the ... (*Homopus bergeri*) and the Madagascan... (*Pyxis planicauda*).

Among pond turtles (Emydidae) the following species are affected:

- Bog Turtle, *Clemmys muhlenbergii*
- Indian Roof Turtle, *Kachuga tecta*
- Tricarinate Hill Turtle, *Melanochelys tricarinata*
- Burmese Eyed Turtle, *Morenia ocellata*
- Coahuilan Box Turtle, *Terrapene coahuila*

1.2 For which species is photodocumentation planned as a replacement for the transponder?

In general the transponder is stipulated for all other Appendix A land tortoises (above 500g). However an amendment of the Federal Wildlife Protection Ordinance is planned for several species. In anticipation of this, photodocumentation is already now accepted in the majority of federal states for the following species. This affects the Radiated Tortoise (*Geochelone radiata*), Hermann's Tortoise (*Testudo hermanni*), the Greek Tortoise (all subspecies of *Testudo graeca*) and the Marginated Tortoise (*Testudo marginata*) (for juveniles see chapters 1.4 and 1.5).

1.3 Instructions for photography

These instructions were drawn up with the aid of an examination of adult animals of the following species:

- ☒ Radiated Tortoise (*Geochelone radiata*)
- ☒ Hermann's Tortoise (*Testudo hermanni*)
- ☒ Egyptian Tortoise (*Testudo kleinmanni*)
- ☒ Marginated Tortoise (*Testudo marginata*)
- ☒ Pancake Tortoise (*Malacochersus tornieri*)

These instructions also apply to the Greek Tortoise (*Testudo graeca*).

Two photographs should be taken per tortoise. On one photo the carapace must be photographed perpendicularly from above (fig.1). The second photo must show the plastron (fig.2). For this purpose the animal can be laid on its back on, eg, a low flowerpot or rubber gasket. In order to maintain a sense of scale of the size of the animal, either squared paper (example: see cover) or white paper with a rule laid next to it should be used as background. A coloured background is unhelpful since it often alters the colours (fig.3). With larger animals a long ruler or folding rule should be laid next to the animal and included in the photograph.

Before photographing the animals should be cleaned: they should ,however ,no longer be wet or damp, since this can cause flash reflection and make the photos unusable. The photography must be sharp and well lit, ie there should be no shadows since otherwise important features become unrecognisable (fig. 4).

The tortoises must be so photographed that they fill the picture. Photographs showing only a part of the tortoise are just as unsuitable as those on which the animal appears too small.

The size of the coloured pictures should be 9 x 13cm and they should be glossy (not matt).

For adult animals of the species listed above it is planned that they should be photographed at an interval of every 5 years, to document possible alterations in the individual characteristics (for juveniles see chapters 1.4 and 1.5).

1.4 Tips for reptile keepers with many animals

If several animals of a species are kept and can now be photographed, there are a few small tricks to avoid losing track when photographing and assigning photographs to the appropriate animals!

Before photography, prepare notelets with, eg, the name of the animal or licence number or an abbreviation of one's own. With adult tortoises these notelets can be laid between neck and carapace (or neck and plastron) and photographed with them. In the case of young animals and snakes the notelet can be laid next to the animal. It is advisable to also place the name or number with the corresponding papers. This makes the job of quick and correct assignment of animals and their papers easier in the event of repeat photos or checking.

Many reptile keepers and breeders mark their tortoises with colour markings on the carapace (please do not fix markings on the sutures between scutes, as otherwise interference with the growth of the scutes results). As an alternative to colour marking with nail varnish, dots or numbers on the marginal plates on the front of the carapace can be painted on with waterproof felt-tip pen (figs. 5 and 6). This is particularly to be recommended for young tortoises.

1.5 What must be done with juveniles?

The Federal Wildlife Protection Ordinance stipulates that for tortoises on Appendix A all juveniles below a weight of 500g must be documented. The instructions described above for the photographing of adult tortoises are valid *for the time being* for juveniles as well. The Federal Environment Ministry intends to request that a new photograph be made for young tortoises every

two years. The photodocumentation must be placed with the corresponding documents at the disposal of the relevant authorities within the framework of registration *without being asked*. The reason for the repeated photos is that up to now it is not known which and how many individual characteristics can be found on juveniles and how often such features can change. Therefore owners of young tortoises are advised to compare their animals often with the photographs so that repeat photographs can be made in time. This method of procedure has the advantage that the tortoise keeper can produce watertight documentation with several photos and thereby present their appropriate authorities with secure proof of identity of their animals. As grounds for finding individual features even in juveniles, the same features as in adult tortoises should be taken into account for the time being (see chapter. 1.6).

1.6 By which features can individual tortoises be recognised?

Hermann's Tortoise, Greek Tortoise, Margined Tortoise, Egyptian Tortoise and Pancake Tortoise

Since the markings on the carapace and plastron of land tortoises can change considerably in the course of their lives, colouration is not used in the recognition of individuals. This applies especially to Hermann's Tortoise (*Testudo hermanni*), the Greek Tortoise (*T. graeca*), Margined Tortoise (*T. marginata*) and Egyptian Tortoise (*T. kleinmanni*), but also the Pancake Tortoise (*Malacochersus tornieri*). In these land tortoise species eleven variable features are used for identification. On the carapace these are the nuchal shield and the fifth vertebral plate (vertebral), as shown in fig. 7a. The features on the nuchal shield are the shapes of the lateral sutures to the marginalia and the suture to the first vertebral plate. The variations in the markings of the lateral sutures of the nuchal shield are listed in figure 8. On the fifth vertebral plate the contours of the sutures against both rib plates (costalia) and fourth vertebral plate are described as variable markings (fig. 7a). The variations in the suture between the nuchal and vertebral shields and the three vertebral shield sutures described can be seen in figure 9. The individual variations in the features are provided with different numbers, so that they can be entered into a record of characteristics. Instructions on the position of plate sutures such as "right" and "left" refer to the animal: the instructions "front" and "behind" describe the position of the suture concerned from the viewpoint of the carapace (see fig. 7a).

Description of carapace features:

| | | |
|--|---|------|
| left suture of the nuchal shield (against left marginal) | = | N-li |
| rear suture of the nuchal shield (against first vertebral plate) | = | N-hi |
| right suture of the nuchal shield (against right marginal) | = | N-re |
| left suture of the fifth vertebral plate (against the left rib plate) | = | W-li |
| front suture of the fifth vertebral plate (against the fourth vertebral plate) | = | W-vo |
| right suture of the fifth vertebral plate (against the right rib plate) | = | W-re |

Five additional features can be found on the plastron. The plastron consists of six pairs of plates, which are arranged along the right and left sides of the centre suture (fig. 7b). These pairs are numbered consecutively, beginning with the gulars, so that the analia become number 6. The position where four particular plates join is abbreviated as "junction" with the corresponding number combination (fig. 7b). The first junction when looking at a plastron is the place where both gulars join with both humerals (Humeralia). This junction is described as "1 x 2".

Description of plastron characteristics

| | | |
|--------------------------------------|---|-------|
| junction of gulars and humerals | = | 1 x 2 |
| junction of humerals and pectorals | = | 2 x 3 |
| junction of pectorals and abdominals | = | 3 x 4 |

| | | |
|-------------------------------------|---|-------|
| juncture of abdominals and femorals | = | 4 x 5 |
| juncture of femorals and anals | = | 5 x 6 |

The features of the carapace and plastron were chosen because they can display many varied shapes or be quite pronounced. In an examination by BENDER & HENLE (2001) a total of nine pronounced variations could be found for the lateral sutures of the nuchal shield (fig. 8). In the case of the lower suture of the nuchal shield and the three sutures of the fifth vertebral shield 16 different suture shapes were determined (fig. 9). In the case of the junctures on the plastron ten different forms of juncture could be demonstrated (see fig. 10).

Nuchal shield (lateral sutures)

- | | |
|--|---|
| = 1 (suture vertically completely straight) | = 6 (suture runs as a gentle curve upwards, shield is widest at bottom) |
| = 2 (suture diagonal and straight) | = 7 (suture runs as a pronounced curve outwards and upwards, the widest part of the shield laying on the curve, the lower starting point directed inwards: plate may be in total longer and narrower) |
| = 3 (suture first straight, then climbing diagonally, with a curve in the upper third and a further stretch upwards: shield is narrower at the top than at the bottom) | = 8 (nuchal is surrounded laterally and at the point by the marginals) |
| = 4 (suture rises briefly diagonally, followed by a curve or point and then a further and significantly steeper rise: shield is narrower at the top)_ | = 9 (suture briefly rises diagonally, then curves outwards and then significantly bows inwards: the bow in the upper part can be as wide as or wider than the lower part)_ |
| = 5 (suture curves outwards, then somewhere in the middle curves inwards and climbs upwards: shield wider below than above: in total the shield can be narrower) | |

All proven feature pronouncements were drawn and provided with numbers for easier registration. This way it is possible to record the individual peculiarities of every animal in the form of a features record (see reptile passport in fig. 11). The individual variations in the characteristics can be entered into the passport: until now, however, this was not legally prescribed.

1.1 Characteristics of the Radiated Tortoise (Geochelone radiata)

The Radiated Tortoise possesses on its carapace a striking pattern of light stripes or rays on a dark background. Even the plastron is very contrasting with its very dark markings on a pale background.

For the identification of adult animals the bright ray pattern on the 3rd vertebral of the carapace is used. For photography and the determination of the markings the animal is positioned with head pointing upwards (see reptile passport, fig. 13). First the number of rays running unbroken from the centre of the scute to the sutures is determined. All short and/or broken rays are likewise counted (compare fig. 12a). Next the plastron is examined. Here the dark bands on the left and right abdominals are checked (compare fig. 12b). Here it is important only to count those bands which run unbroken to the central suture. These four numbers should be noted down since they are used for identification.

It is possible to draw up a very precise and therefore very secure record for Radiated Tortoises by noting down exactly the position of the light rays on the 3rd vertebral. These method can be performed in the following manner: the 3rd vertebral scute can be divided into minute intervals like a dial. In this instance the zero or 60-minute mark lays in the middle of the upper suture to the 2nd vertebral scute. The 15-minute mark lays on the point at which the right lateral suture meets the suture between the 2nd and 3rd costal. The 30-minute mark lays in the middle of the rear suture of the vertebral scute. The 45-minute mark again lays opposite the 15-minute mark at the point of contact of the left-hand suture of the vertebral scute with the suture between the 2nd and 3rd left-hand costals (see fig. 12a).

All the light rays which visibly run unbroken from the middle of the scute to the sutures are important. The contact point of each ray on the suture of the vertebral scute is noted down as a "minute position". In this way a record can be gained which consists of as many minute positions as there are uninterrupted light rays to be found on the third vertebral scute of the animal in question. Short or broken rays are recorded as minute positions in the same way, but in contrast to the complete ones, in brackets (see record, fig. 13). By way of example this method was used for a Radiated Tortoise (see reptile passport in fig. 13). It is also the case here that this very exact description of morphological variations can be entered into the passport but is not yet prescribed by law.

Snakes

1.1 In general which snakes must be photographed?

Altogether six species of snake can be documented photographically. This includes species which are seldom kept or presumed extinct.

In the boa and python family (Boidae) this affects the Mauritius Boa (*Bolyeria multicastrinata*), the Round Island Boa (*Casarea dussumieri*), the Mona Island Boa (*Epicrates monensis*) and the Sand Boa (*Eryx jaculus*). In addition to viper (Viperidae) species the Latif Adder (*Vipera latifi*) and the Meadow Viper (*Vipera ursini*) are to be photographed. Within the framework of the Hungarian protection programme for Meadow Viper the colour pattern on the crown of the head of animals of every age was used as a recognition feature (Meadow Viper Working Group 1996).

Beyond this, all juveniles in the species listed in Appendix A up to a weight of 200g should be documented with the aid of photographs. Unfortunately in most snake species up to now no features have been known which could be used for individual identification (for exceptions see sections 2.3 and 4).

1.2 For which snakes is photodocumentation intended as a replacement for the transponder?

The only snake species for which an amendment to the Federal Wildlife Protection Ordinance is intended are the boid species Madagascar Tree Boa (*Sanzinia madagascariensis*), the Dumeril's Boa (*Acrantophis dumerili*) and the Madagascar Ground Boa (*Acrantophis madagascariensis*) (IGR 2000; BENDER & HENLE 2001). Beyond this the Federal Wildlife Protection Ordinance lays down which recognition method of individuals must be used for further species (see section 2.2). Further information on individual features as well as the necessary photography is listed under section 2.3.

1.3 Which features are important in the Dumeril's Boa, the Madagascar Ground Boa and the Madagascar Tree Boa?

In the Dumeril's Boa (*Acrantophis dumerili*) the colour markings on the top of the head are sufficient (IGR 2000). Since no alterations to the colours appear in the young of this species, lifelong recognition is guaranteed. Consequently only one photograph, of the top of the head, needs taking (compare *Boa constrictor occidentalis* in fig. 20a).

Both sides of the head in the Madagascar Ground Boa (*Acrantophis madagascariensis*) show striking black spots on a lighter background in the region of the upper and lower lips (compare figs. 16a, b). Particularly easy to recognise are the individual differences in the black markings of the mainly white ventral area of the lower jaw (fig. 16c). For this species, taking a total of three photos (both sides of the head and the underneath of the lower jaw) is recommended. Here also lighting, shadow, reflection and background must be taken into account (figs. 17a, b).

In the case of the Madagascar Tree Boa (*Sanzinia madagascariensis*) the overall colour of the body changes from juvenile to adult animal. According to information from breeders and keepers, however, the dark markings remain unaltered. This dark pattern, which is clearly visible on both sides of the head and the back, consists of variable spots (roundish or with troughs) or bands (running longitudinally) which sometimes form narrow links with one another. For the recognition of the individual the area with the first five to eight dark spots behind the head is sufficient (BENDER & HENLE 2001). Through the diversity of the spots and their arrangement on the body, identity can be established beyond doubt by a simple comparison of photograph and animal.

Owners of this snake species should photograph their animals from both sides and above (figs. 14a-c). Consequently every animal must have three photos available; this appears to be necessary at this point in time, since there are not yet any detailed guidelines or indications from the authorities concerning the number of photos.

1.4 Instructions for photographing

All snake keepers know that colour in snakes is at its clearest after a shed. Therefore it should be self-evident that animals should not be photographed shortly before or during a shed. With the photography of snakes we recommend calling on the services of a helper who can take over either the handling of the snake or the photographing.

In general it is important in photographing that the photos are well lit and that no shadows or reflection show up (figs. 16a, 21a). The snake in question must be so photographed that the important markings for the species fill the picture. Photos on which only a portion can be seen are just as unsuitable as photos on which the animal appears too small (figs. 15d, 21b).

The size of the colour pictures should amount to 9 x 13 cm and should be gloss (not matt). According to the species a lot of colour pictures will need to be taken of each animal in different ways.

A patterned background is most unfavourable, since the colours are altered to a degree. Therefore it is better to choose a monotone background (figs. 15b, c, 17b, 21b). With all snakes the absolute length of the animal as well as the weight should be recorded in the reptile passport.

Photos of the snake's head must be taken in such a way that, eg, the top of the head can be seen directly from above and without a sideways tilt of the head. The same applies for side shots of the head (fig. 17b). For photos of the body markings the snake should be extended and portrayed as straight as possible (figs. 14a-c, 15c).

Lizards

1.1 Which species are known to have individual markings?

Among the family Lacertidae the species *Podarcis lilfordi* and *Podarcis pityusensis* have very good features for individual identification (BENDER & HENLE, 2001). Both these species are exclusively covered by photodocumentation, since they are exempt from transponder tagging on the grounds of their size (Federal Wildlife Protection Ordinance enclosure 6, no cross in column 6).

The markings in both lizard species are found on the animals' breast. The scalation of the first five scale rows below the collar shows individual characteristics for every animal (fig. 18). It is not necessary to prepare a detailed record since a visual comparison is quick and easy on the basis of the high amount of variation in the shape of the scales.

Since from this it can be taken that the features of the scales remained unaltered (except in case of injury) throughout life, they can serve as permanent identification. Consequently a single photo per animal is sufficient for lifelong identification.

1.2 Instructions for photography

Photographing the breast of these small lizard species requires a camera equipped with macro lens, photographic experience and possibly a helper to handle the animals.

The breast of every animal must be photographed, as shown in figure 18. The photos should display the same quality as described in section 1.3 for tortoises (well lit, without shadows, sharp and filling the picture) (see figs. 19a, b). As preparation for later classification the age and - if possible - the sex also should be noted.

Information on further Appendix A reptile species

For some reptile species on Appendix A not mentioned up to now information on suitable or potentially suitable markings for the recognition of individuals is available from reptile keepers and literature. Among these are also species which are seldom or never kept in human captivity.

The indications that follow make no claim to completeness. Hence the urgent request to all reptile owners to place additional useful information at the disposal of the DGHT!

Indications for individual markings:

- ☒ Leatherback Turtle (*Dermochelys coriacea*), pigment spots on the top of the head (McDONALDS & DUTTON 1996);
- ☒ Nile Crocodile (*Crocodylus niloticus*), the pattern of the markings on both sides of the tail (SWANEPOEL 1996);
- ☒ Common Chameleon (*Chamaeleo chamaeleon*), the lateral pattern of spots on the body (Chameleon Breeding Society);
- ☒ Desert Monitor (*Varanus griseus*), dark markings on the back (TSELLARIUS & CHERLIN 1991).

Both the following large snake species were also examined within the framework of the DGHT project "Recognition of individual reptiles", but because of the small number of animals could not be evaluated in detail. The features found must be validated with the help of additional investigations on a greater number of animals. In the meantime, however, they may be used as potential features for the recognition of individuals. In these cases acceptance of photodocumentation is at the discretion of the appropriate authority.

In the Argentine or Southern Boa (*Boa constrictor occidentalis*) the top of the head has a light beige/white pattern on a grey-black background (fig. 20a). The pattern on both sides of the head also differs from animal to animal (figs. 20b, c). These features were individually different in all the animals covered up to this point. In young snakes the light pattern is unclear or not pronounced; it only becomes recognisable from about the age of 2 years. In animals of all ages the saddle markings on the body remain stable, according to statements from breeders. Given this state of knowledge it is recommended that at least three photographs be taken for each adult animal: one photograph of the top of the head and one of both sides of the head, and an additional one for juveniles showing the saddles on the back.

As the Jamaican Boa (*Epicrates subflavus*) shows no striking markings, the scalation in the area of the head was taken into consideration for the recognition of individuals. For the project only a small number of animals was available (BENDER & HENLE 2001), for which reason no analyses could be performed. However it was established that the scale patterns on top and both sides of the head were individually pronounced in all animals. On the basis of these results it is possible to recommend the identification of this snake species with the aid of three photos of the head (top and both sides) (figs. 22a-c).

Photography Checklist

- suitable camera
- good lighting
- dry, clean animals (snakes not to be photographed directly before or during shedding)
- suitable background (eg squared paper, square length = 1 cm)
- ruler or folding rule
- paper for recording and animal numbers (suitable pens for marking tortoises)
- rubber washer or flowerdish for tortoise photos
- person to assist

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Reptile Passport No.:

| | | |
|-------------------------------------|-----------------------------|--|
| Scientific Species Name: | | |
| German Common Name: | | |
| Sex: | | |
| Origin (wild-caught, captive-bred): | | |
| Breeder: | | |
| | | |
| | | |
| Date of photo (age of animal): | | |
| Length of carapace: | | |
| Weight: | | |
| Distinctive features: | | |
| Recognisable markings: | | |
| | Carapace (suture contours): | |
| | | |
| | Plastron (junctures): | |

Form for Testudo, *Malacochersus tornieri*

Reptile Passport No.:

| | |
|-------------------------------------|--------------------|
| Scientific Species Name: | Geochelone radiata |
| German Common Name: | Radiated Tortoise |
| Sex: | |
| Origin (wild-caught, captive-bred): | |
| Breeder: | |
| | |
| | |
| Date of photo (age of animal): | |
| Length of carapace: | |
| Weight: | |
| Distinctive features: | |
| Recognisable markings: | |
| Carapace (3rd vertebral): | |
| Minutes: | |
| | |
| | |
| Plastron (4th pair of plates): | |

Form for *Geochelone radiata*

Reptile Passport No.:

| | |
|-------------------------------------|--|
| Scientific Species Name: | |
| German Common Name: | |
| Sex: | |
| Origin (wild-caught, captive-bred): | |
| Breeder: | |
| | |
| | |
| Date of photo (age of animal): | |
| Length of carapace: | |
| Weight: | |
| Distinctive features: | |
| Recognisable markings: | |

Form for snakes